Alcohol Consumption Awareness
Drank because it felt smart? Surrender for the same reason.

History and Purpose of Analysis

For a long time, alcohol has been perceived as a means of social engagement for many groups. Whether it be all day drinking, social drinking, or moderate consumption of alcohol, it is something which gives people pleasure and helps them uplift their mood.
However, anything in excess is considered harmful, especially excessive drinking, which can have many negative outcomes such as high mortality rate, road accidents, infertility etc. Focusing on high alcohol consumption, we want to perform an analysis to measure its causes and effects.

Causes	Effects
Unemployment	Road Accidents
High income	Infertility in women
Mental Health	Mortality
Lifestyle/Culture	Health Disorders
Social Quotient	Violence/Abuse/Crime

The above tables give an uber idea of causes which might lead to excessive alcohol consumption and its corresponding effects. Further we want to explore different demographics like gender, location, income buckets etc. and the weight each of them hold on to consumption.

This article [1] from "The New York Times" has been our source of inspiration. It discusses how alcohol is one of the most common forms of substance abuse and a leading cause of preventable deaths and disease, killing almost 100,000 Americans annually and contributing to millions of cancers, car accidents, heart attacks and other ailments.

The future focus of this analysis is to highlight findings and insights to **educate audiences** about the **harmful effects of alcohol** intake and create a sense of awareness to not make it a habit. There are awareness campaigns in which people can participate by talking to members of a community about the dangers of excessive alcohol usage. Also, it's important to educate children about the dangers of excessive drinking and the impact it can have on their future.

Objective and Goals

Our major goal for this analysis is to highlight the magnitude of alcohol consumption worldwide and take a defined direction to focus on the causes and effects of alcohol consumption in the United States.

The questions we will be focusing on are as follows,

- Is alcohol a major problem in the United States as of 2019?
- Is unemployment causing increased alcohol consumption in the United States as of 2019?
- Are road accidents a major effect of increased alcohol consumption?

Once we can answer these questions, we can create a sense of awareness among individuals. Generally, people who are victims to substance abuse live in denial and don't address it as a problem. By highlighting the causes which can lead to increased alcohol consumption and later defining the effects, we can help these people realize this problem and encourage them to act positively towards it.

Description of the Dataset

In our analysis, we have used many data sources whose descriptions are given below. We have also attached the corresponding graph made by using the data source just below the description for ease.

Source 1	Alcohol consumption survey data provided by WHO [2]
Format	CSV file

Data collection	The data collected was divided into 3 levels of Consumption a) Recorded APC – 3-year average (2009,2010,2011) b) Unrecorded APC – 2010 – Regression Analysis for country level proportion. c) Tourist Consumption- 2010 – Assumptions: 1)Same amount of alcohol when on tour and home countries 2)Global tourist consumption is equal to 0 Where APC: Alcohol Per Capita (World Health Organization, 2018) **Reference:** World Health Organization. (2018) - *Global status report on alcohol and health 2018.*
Attributes interested in along with data types	● Location (Country): Geographic dimension ● FactValueNumeric (Alcohol Consumption): Float ● Period (Year): Date Format ● Dim1 (both sexes): String ● Datasize:11238*22

Source 2	Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2019 (GBD 2019) Results. Seattle, United States: Institute for Health Metrics and Evaluation (IHME), 2021. [3]
Format	CSV file
Data collection	Study extracted relative risk and exposure estimates from 46,749 randomized controlled trials, cohort studies, household surveys, census data, satellite data, and other sources. For details, please visit the link. [4]
Attributes interested in along with data types	● Countries: Geographic dimension ● Risk Factors: String ● Period (Year): Date Format ● No. of deaths: Integer ● Datasize:224280*5

Source 3	**Drunk driving statistics by US states in 2018** [5]
Format	CSV file
Data collection	The latest drunk driving statistics from the NHTSA Age, Gender and Location are significant factors. Those most at risk for drunk driving are young people, motorcyclists and drivers with prior DWI convictions.
Attributes interested in along with data types	● State: Geographic dimension ● Total fatalities: Integer ● Total alcohol-related fatalities: Integer ● % of all fatalities involving alcohol: Integer ● Year: Date Format

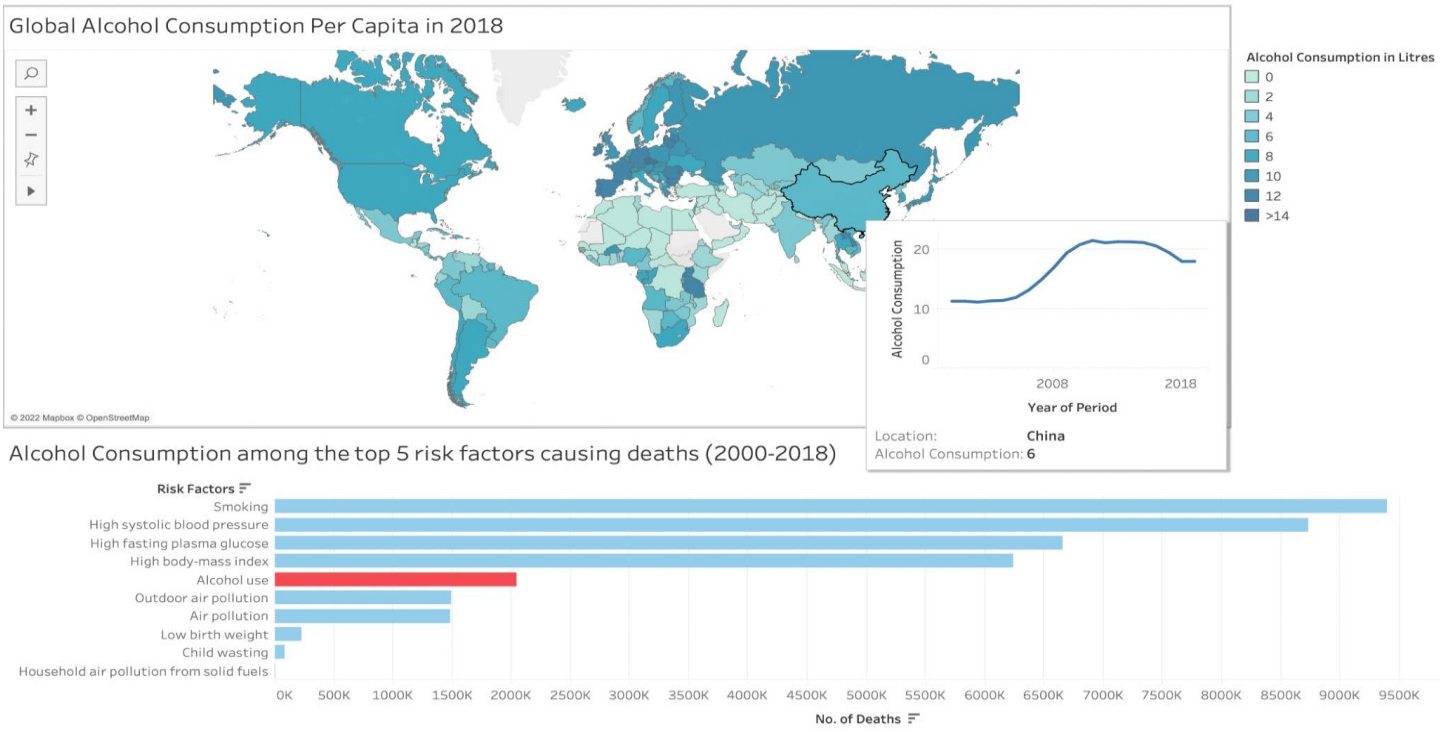
Source 4	**Alcohol Use Disorder by US States in 2018** [6]
Format	CSV file
Data collection	The Mental Health America organisation conducts survey year wise and state wise based on 6 six prevalence options such as any mental illness, substance use disorder, serious suicidal thoughts, alcohol use disorder etc. The data that we are using has a state wise percentage of the population affected by Alcohol Use Disorder. Alcohol Dependence and Illicit Drug Use is influenced by state demographics including: age, degree of urbanicity, and economic conditions (Mental Health in America - Prevalence Data 2018, n.d.). Method Used: Calculating, and summing, the Z scores for measures Adult Alcohol Dependence in the Past Year (2017)

Attributes interested in along with data types	• State: Geographic dimension • % Of population affected: Integer • Year: Date Format

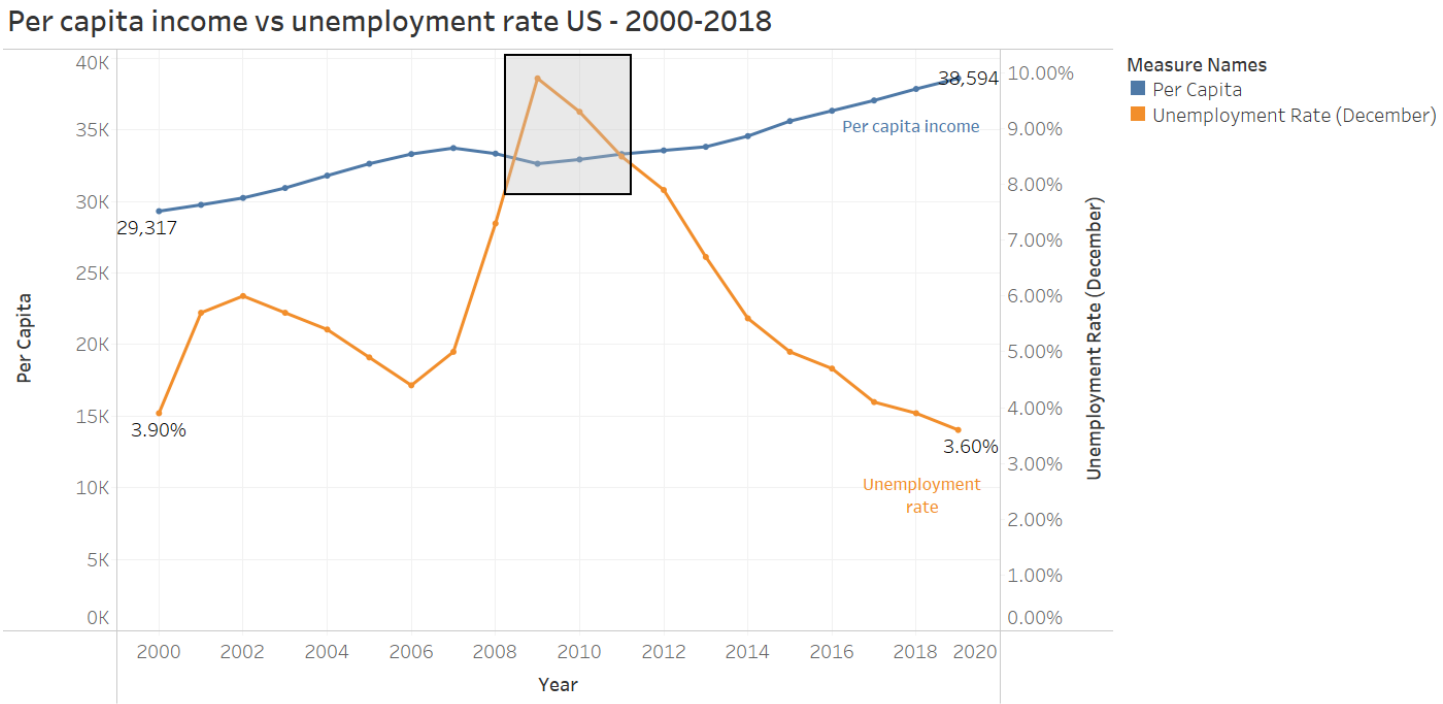
Source 5	Unemployment Rates for States (bls.gov) [7]
Format	Excel file
Data collection	The data is taken from the US labor bureau statistics, The data collection is based on the number of people claiming unemployment benefits from the US Government.
Attributes interested in:	• Year: Date Format • Unemployment Rate: Integer (percentage) • Annual GDP growth: Integer (percentage)
Source 6	U.S. Consumer Spending 1970-2022 | MacroTrends [8]
Format	Excel file
Data collection	The data is taken from the US labor bureau statistics, The data collection is based on the number of people claiming unemployment benefits from the US Government.
Attributes interested in:	• Year: Date Format • Per capita: Integer • Spending: Integer • Dataset size: 22*3

Source 7	Economic Research Service: U.S. DEPARTMENT OF AGRICULTURE [9]
Format	Excel file
Data collection	The primary data sources for the Alcohol Expenditure Series are the Economic Census for data on sales by employer establishments and surveys for total (employer and nonemployer) sales data from the U.S. Department of Commerce, Bureau of the Census.
Attributes interested in:	• Spending Type: Location where alcohol was purchased (String) • Spending Amount: Integer • Year: Date • Dataset Size: 144*3

Visualization Plan

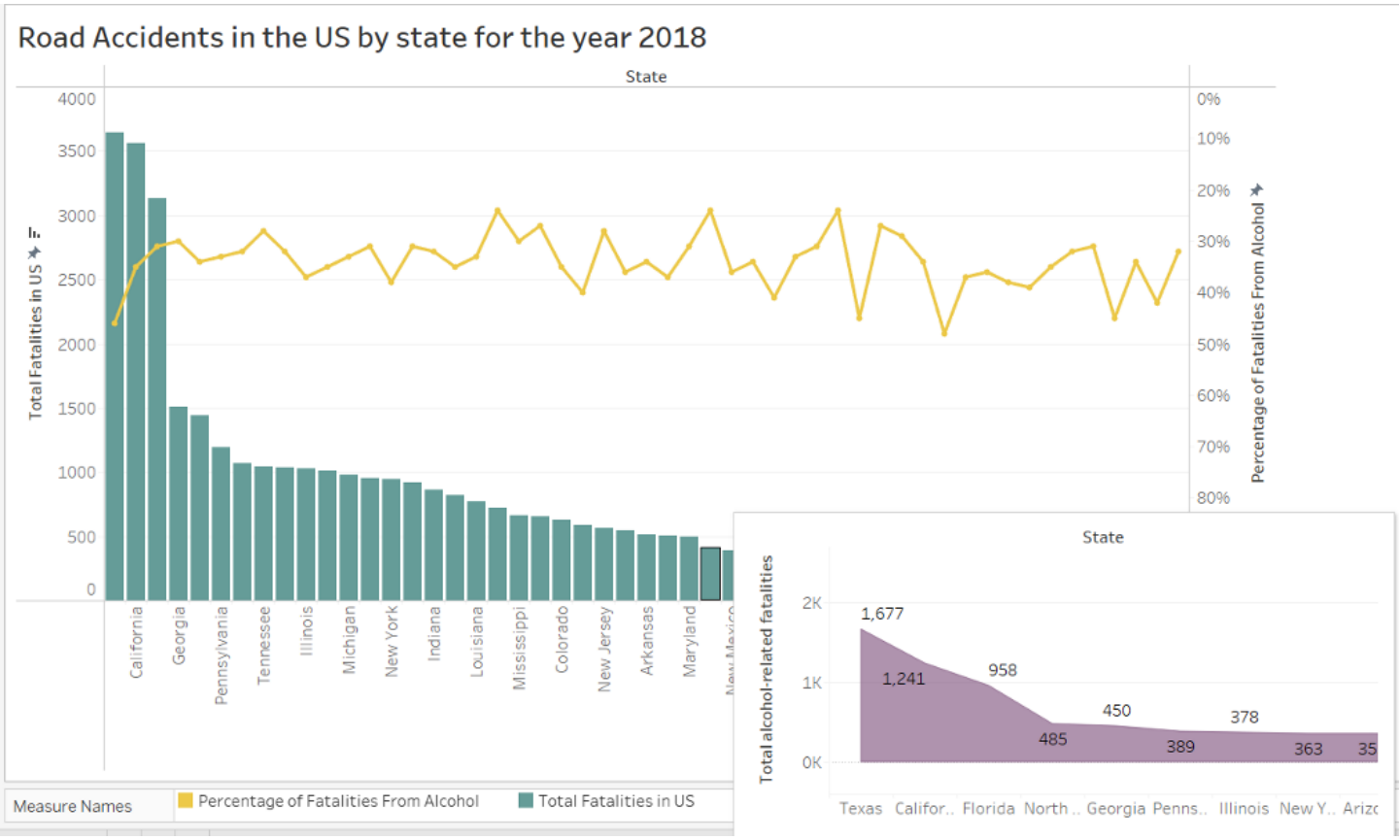


We start our analysis by exploring the magnitude of consumption around the world and the trends from 2000 to 2018. Furthermore, by plotting the deaths caused by different risk factors in the United States, we figure that it accounts for one of the top 5 reasons.



The trend shows that with the increase in per capita income, over the years, alcohol consumption has also shown steady increase. During the 2008 recession, the dip in the per capita income and the peak of unemployment in comparison to

alcohol consumption shows that there is a positive correlation between the two factors. Through these findings we will further analyze if unemployment is one of the causes of alcohol consumption.



The distribution shows the *percentage* of road accidents caused by alcohol versus total fatalities in all the states of the US. The highlighted section depicts the statistics of fatalities from alcohol for the year 2018 in the US.

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